

**Physical Science
Semester 1 Final**

**Chapter 1
True or False**

- ___ 1. An experiment is designed to specifically test the hypothesis.
- ___ 2. The metric system works on a base 10 making conversion simple.
- ___ 3. A pie chart show parts of the whole or percentages.
- ___ 4. Recorded observations or measurements are called variables.
- ___ 5. A balance is used to measure length.

Multiple Choice

- ___ 6. A condition that remains constant during an experiment is
 - a. control
 - b. liter
 - c. meter
 - d. variable

- ___ 7. The SI unit for length is
 - a. control
 - b. liter
 - c. meter
 - d. variable

- ___ 8. A condition that changes during experiments is
 - a. control
 - b. liter
 - c. meter
 - d. variable

- ___ 9. The basic SI unit of volume
 - a. gram
 - b. liter
 - c. meter
 - d. hypothesis

- ___ 10. An educated guess is a
 - a. gram
 - b. liter
 - c. meter
 - d. hypothesis

- ___ 11. The amount of stuff in an object is
 - a. gram
 - b. data
 - c. mass
 - d. hypothesis

- ___ 12. The SI unit for mass is
 - a. gram
 - b. liter
 - c. meter
 - d. hypothesis

- ___ 13. Data expressed with words is
 - a. data
 - b. hypothesis
 - c. qualitative
 - d. quantitative

- ___ 14. Data expressed with numbers is
a. data
c. qualitative
b. hypothesis
d. quantitative
- ___ 15. 765 g = _____ kg
a. 7.65
c. 7650
b. 0.765
d. 765,000
- ___ 16. 14 L = _____ mL
a. 1.40
c. 140
b. 0.14
d. 14,000
- ___ 17. 2648 cm = _____ km
a. 264.8
c. 0.2648
b. 26.48
d. 0.02648
- ___ 18. 78 m = _____ cm
a. 7.8
c. 780
b. 0.78
d. 7,800
- ___ 19. 175 mg = _____ g
a. 0.175
c. 1,750
b. 17.5
d. 175,000
- ___ 20. 1000 mL = _____ L
a. 100
c. 1
b. 10
d. 0.001
- ___ 21. Convert 5000 to correct scientific notation.
a. 500×10^2
c. 0.5×10^3
b. 5×10^3
d. 0.005×10^2
- ___ 22. Convert 0.025 to correct scientific notation.
a. 2.5×10^2
c. 0.025×10^{-3}
b. 25×10^3
d. 2.5×10^{-2}
- ___ 23. Convert 7.9×10^3 to correct standard notation.
a. 0.79
c. 790
b. 0.079
d. 7900
- ___ 24. . Convert 1.2×10^{-2} to correct standard notation.
a. 0.12
c. 120
b. 0.012
d. 1200

- ___ 25. All are important aspects of the scientific method EXCEPT
- a. it is standard
 - b. it is repeatable
 - c. it is organized
 - d. it is a secret code for scientists

Chapter 2

True or False

- ___ 26. A gas is a form of matter with variable shape but definite volume.
- ___ 27. A solid is a form of matter with definite shape and definite volume
- ___ 28. A liquid is a form of matter with variable shape and variable volume
- ___ 29. Sodium Chloride (NaCl) is a mixture.
- ___ 30. Silver is an element.

Multiple Choice

- ___ 31. Properties that can be observed or measured are
- a. chemical
 - b. physical
- ___ 32. Properties or changes that alter a substance's composition are
- a. chemical
 - b. physical
- ___ 33. Changes easily manipulated and that do not alter a substance's composition are
- a. chemical
 - b. physical
- ___ 34. Changes that are indicated by a gas, a solid, heat or light are
- a. chemical
 - b. physical
- ___ 35. Bending a copper wire is what kind of change?
- a. chemical
 - b. physical
- ___ 36. Shaving block of ice for snow cones is what kind of change?
- a. chemical
 - b. physical
- ___ 37. Grapes fermenting to wine is what kind of change?
- a. chemical
 - b. physical
- ___ 38. Melting an ice cube is what kind of change?
- a. chemical
 - b. physical
- ___ 39. Adding energy to a liquid creates a
- a. Solid
 - b. liquid
 - c. gas
- ___ 40. Adding energy to a solid creates a
- a. Solid
 - b. liquid
 - c. gas

- ___ 41. A liquid losing energy to its environment creates a
a. Solid b. liquid c. gas
- ___ 42. What is the density of a substance with a mass of 360 g and a volume of 40 mL?
a. 18 g/mL b. 9 g/mL
c. 4 g/mL d. 2 g/mL
- ___ 43. Steel has a density of about 8 g / mL. What is the mass of a block of steel with a volume of 4 mL?
a. 32 g b. 16 g
c. 8 g d. 2 g
- ___ 44. The density of tin is approximately 7 g / mL. What is the volume of 3.5 g of tin?
a. 2 g b. 4 g
c. 6 g d. 8 g
- ___ 45. Find the density of a substance that has a mass of 60 g and a volume of 15 mL?
a. 2 g b. 4 g
c. 6 g d. 8 g
- ___ 46. Sand is an example of a
a. compound b. element c. mixture
- ___ 47. Pure water is an example of a
a. compound b. element c. mixture
- ___ 48. Chicken noodle soup is an example of a
a. compound b. element
c. homogeneous mixture d. heterogeneous mixture
- ___ 49. Soda pop is an example of a
a. compound b. element
c. homogeneous mixture d. heterogeneous mixture
- ___ 50. Iron is an example of a
a. compound b. element
c. homogeneous mixture d. heterogeneous mixture

Chapter 3

True or False

- ___ 51. The atomic mass is the total number of neutrons and protons.
- ___ 52. The atomic number is the number protons of an element.
- ___ 53. Electrons add to the mass of an element.

- ___ 54. Atom means “undivided.”
- ___ 55. An element always has the same number of neutrons.

Multiple Choice

- ___ 56. To gain a full set of electrons, atoms can _____ electrons.
- a. gain
 - b. lose
 - c. both a and b
 - d. none of the above
- ___ 57. Cations are _____ charged ions .
- a. negatively
 - b. positively
- ___ 58. Anions are _____ charged ions.
- a. negatively
 - b. positively
- ___ 59. The vertical columns of elements on the periodic table are called
- a. families
 - b. groups
 - c. periods
 - d. both a and b
- ___ 60. The horizontal rows of elements on the periodic table are called
- a. families
 - b. groups
 - c. periods
 - d. both a and b
- ___ 61. A vertical column on the periodic table represents
- a. elements with the same number of valence electrons
 - b. the number of neutrons in the nucleus of an atom
 - c. the number of energy levels in an atom
 - d. elements belonging to the same region (ex. metals)
- ___ 62. A horizontal row on the periodic table represents
- a. elements with the same number of valence electrons
 - b. the number of neutrons in the nucleus of an atom
 - c. the number of energy levels in an atom
 - d. elements belonging to the same region (ex. metals)
- ___ 63. Metalloids have properties of
- a. metals
 - b. nonmetals
 - c. both metals and nonmetals
 - d. neither metals and nonmetals
- ___ 64. The most reactive metals are in Group
- a. 1
 - b. 2
 - c. 17
 - d. 18
- ___ 65. The most reactive nonmetals are in Group
- a. 1
 - b. 2
 - c. 17
 - d. 18

